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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,527	10/24/2003	Lewis Michael Popplewell	IFF-24-I	2313

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INTERNATIONAL FLAVORS & FRAGRANCES INC.
521 WEST 57TH ST
NEW YORK, NY 10019

EXAMINER

ROGERS, JAMES WILLIAM

ART UNIT	PAPER NUMBER
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1618

MAIL DATE	DELIVERY MODE
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08/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/693,527	Applicant(s) POPPLEWELL ET AL.	
	Examiner James W. Rogers, Ph.D.	Art Unit 1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/02/2007 has been entered.

Response to Amendment

Applicant's amendment to the claims has been entered, claims 1-25 have been cancelled and new claims 26-29 are now entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 27 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically claim 27 recites that the liquid flavor or fragrance system comprises about 70 to about 97 weight percent flavor or fragrance

material, while there is support for the above range for a flavor material there is no written description for a fragrance material with the above concentration range.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by Buhler et al. (US 3,653,921).

Buhler teaches a butter flavored food additive concentrate, the concentrate can be in liquid form and contains 1-95% by weight of an enzyme modified milk fat (meets flavor material) and 5-99 percent edible diluent including cellulose gums and carboxymethylcellulose. See abstract, col 4 lin 1-11, col 5 lin 1-21 and claim 1.

Claim Rejections - 35 USC § 103

Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over EI-Nokaly (US 5,599,555 cited in previous office action).

EI-Nokaly discloses polymeric liquid crystals which are used to deliver nutrients, flavors and other ingredients to food and health care products, the liquid crystals are comprised of A) 0.001-60% active ingredient including edible oils such as peppermint and spearmint oil and B) 40 to about 99.999% of a liquid crystal containing 1) about 10

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to about 90 percent solvent (including flavor oils such as peppermint and wintergreen oil), 2) 10-90% polysaccharide (ethyl and hydroxypropyl celluloses are listed specifically) and 3) emulsifiers (fatty acid monoglycerides are specifically mentioned). See col 1 lin 19-24, 39-51, col 4 lin 16-44, col 5 lin 12-23, col 6 lin 35-67, col 7 lin 1-26, col 10 lin 39-54 and claims. Regarding the limitations on the amount of flavor material, since the active ingredient can be a flavor oil and the solvent in the liquid crystal can also be a flavor oil, from the ranges listed above, the upper limit for the flavor oil in EI-Nokaly could be as high as about 96% (about 60% active ingredient flavor oil and about 40 percent of the liquid crystal comprising about 90 percent flavor oil as the solvent). The amount of cellulose polymer in the overall composition could be from about 4% (10% cellulose in the liquid crystal which comprises 40% of the total composition) to about 90%. It is clear from the disclosure of EI-Nokaly that the amounts of active ingredient, solvent and polysaccharide are variable or optimizable based upon the intended use, therefore it is within the skill level of an ordinary practitioner in the art to vary the concentrations of the ingredients above in order to achieve the desired consistency of the final product. EI-Nokaly while disclosing the use of emulsifiers in the polymeric liquid crystal the patent is silent on the amount that could be used within the liquid crystal. However, from the amounts cited above for the active and liquid crystal containing solvent and cellulose it is obvious that the amount of emulsifier could fall within applicants claimed range (from above the amount of flavor oil could be as high as $96\% \pm 9.6\%$ (examiner defined "about" as $\pm 10\%$) while the amount of cellulose could be as low as $4\% \pm 0.4\%$, therefore from the ranges listed above the amount of emulsifier

used could be anywhere from 0-10%, within applicants claimed range. Besides the above arguments for the amount of emulsifier, several examples such as emulsified spreads (margarine/butter) within EI-Nokaly used emulsifiers in the range cited by applicants, therefore one skilled in the art could reasonably ascertain that those disclosed percentages would be advantageous to use in the polymeric liquid crystals disclosed or in other applications employing the polymeric liquid crystals. Besides the arguments above on the amounts of the claimed ingredients in applicants invention it is the position of the office that generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969).

Response to Arguments

Applicant's arguments filed 07/02/2007 have been fully considered but they are not persuasive. Applicant asserts that EI-Nokalay neither teaches or suggests the claimed limitation of a continuous liquid and in fact teaches away from a liquid. To support their assertion applicants state that other polymeric systems other than a liquid crystal are not desired. Applicants state that modifying EI-Nokaly to arrive at their

present invention would render EI-Nokaly unsatisfactory for its intended purpose, thus there is no motivation to modify. Applicants lastly state that EI-Nokaly expressly teaches that a liquid crystal is distinguishable from an isotropic solution.

The relevance of these assertions is unclear. Firstly liquid crystals are liquids, they perhaps can be considered as a species within the broad genus of liquids. Secondly there is no need to modify the teachings of EI-Nodaly since the reference as stated above already obviously discloses all of applicants claimed invention. If fact there is no need to modify EI-Nokely since applicants claimed invention does not preclude the use of liquid crystals. Regarding applicants assertion that EI-Nokaly teaches that liquid crystals are distinguishable from isotropic solutions, this point is considered moot because applicants do not claim an isotropic solution rather applicants claim a continuous solution. The limitation that the liquid is a continuous liquid is not considered to be particularly limiting and would not preclude the liquid crystals of EI-Nokaly.

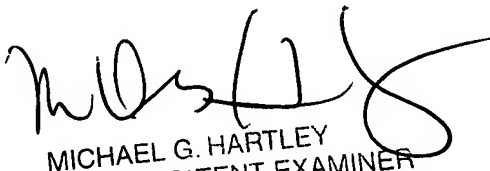
Conclusion

No claims are allowed. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James W. Rogers, Ph.D. whose telephone number is (571) 272-7838. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Hartley can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MICHAEL G. HARTLEY
SUPERVISORY PATENT EXAMINER